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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/012,459  
Filing Date: December 12, 2001  
Appellant(s): AN ET AL.

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Daniel Y. J. Kim  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 2/19/2008 appealing from the Office action mailed 7/27/2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function

and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference characters. The brief is deficient because dependent claim 49 has been canceled, therefore no summary of that claim should exist.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: Claims 1, 2, 4-6, 9-15, 19-22, 35-37, 39-44, 46-48 and 50 stand rejected under 35 USC § 103(a) for being obvious in view of the Shteyn patent (US-6,782,253) taken in combination with the Johnson patent (US-6,456,234).

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,782,253	Shteyn et al.	8-2004
6,456,234	Johnson	9-2002

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 2, 4-6, 9-15, 19-22, 35-37, 39-44, 46-48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shteyn et al. (US-6,782,253 hereinafter, Shteyn) in view of Johnson (US-6,456,234).

Regarding claim 1, Shteyn teaches an information service system comprising:

a database server (Fig. 4 [410]) that receives and stores information on a plurality of different shops within a building; (Col. 8 lines 12-41)

a data transmission server at a prescribed location that communicates with a customer's mobile terminal and automatically radio-transmits a first type of information including the information on the shops to the customer's mobile terminal when the customer enters the building; (Col. 4 lines 18-23 and Col. 7 lines 42-45)

an operation server that controls the database server and the data transmission server; (Fig. 4 [420]) and

a sudden information data transmission device (Fig. 4 [402, 404, 406 & 408]) provided for the shops, wherein the sudden information data transmission device is coupled to control terminals (Fig. 4 [412, 414, 416 & 418]) in the shops, is installed within a predetermined area different from the prescribed location of the data transmission server (Col. 8 lines 12-41), and radio-transmits a second type of information including sudden event information to the customer's mobile terminal when a sudden event is generated by one of the shops (Col. 6 lines 17-26), the sudden event information transmitted while the customer is within a range of said sudden information

data transmission device (Col. 3 lines 1-6, 36-51 and Col. 6 lines 17-26) where reception by the mobile terminal is possible, wherein the first type of information is transmitted at different times and through different wireless transmission links than the second type of information. (Col. 6 lines 17-26 *i.e.* second type, Col. 7 lines 42-45 *i.e.* first type and Col. 8 lines 12-41)

Shteyn teaches the network cell can give a guide of the beacons located within a local geographic area of the mobile phone (Col. 7 lines 38-42) in order to receive the sudden information regarding sales (Col. 4 lines 18-23 & Col. 6 lines 17-26), but differs from the claimed invention by not explicitly reciting that the operation server continuously receives information derived from reception by a mobile communication network of a pilot signal from the mobile phone to confirm a location of the customer within the building.

In an analogous art, Johnson teaches a system designed to communicate, receive signals and provides location dependent information for many devices simultaneously (Fig. 2 [204, 206 & 208]) and continuously (Col. 10 lines 17-19 and Fig. 3B) by triangulating the location of a mobile terminal in order to confirm the location of a customer within a building as a precondition to transmitting the sudden information (*i.e.* CADE "candidate delivery event" Col. 2 lines 16-37 and Col. 9 line 60 through Col. 10 line 7). (Fig. 5A and Col. 11 line 49 through Col. 12 line 11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the system of Shteyn after modifying it to incorporate the triangulation of Johnson. One of ordinary skill in the art would have been motivated to do this since triangulating a

transmitting signal is a common method in the art to determine the location of a mobile terminal because GPS circuitry is not accurate within buildings without requiring additional equipment to retransmit the satellite signals within the building.

Regarding claim 2, Shteyn in view of Johnson teaches a radio data transmitter/receiver is installed in the data transmission server (Shteyn Col. 4 lines 18-23 and Col. 7 lines 42-45) and the customer's mobile terminal (Shteyn Col. 3 lines 39-41), respectively, for a mutual radio data transmission/reception. (Shteyn Col. 3 lines 1-51)

Regarding claim 4, Shteyn in view of Johnson teaches the sudden information data transmission device communicates by a short-distance radio transmission. (Shteyn Col. 3 lines 1-51 and Col. 8 lines 12-41)

Regarding claim 5, Shteyn in view of Johnson teaches a radio data transmitter/receiver is installed in the sudden information data transmission device to support the radio transmission. (Shteyn Col. 8 lines 12-41)

Regarding claim 6, Shteyn in view of Johnson teaches the prescribed location is within the building. (Shteyn Col. 6 lines 17-26 & Col. 7 lines 33-54)

Regarding claim 9, Shteyn in view of Johnson teaches the data transmission server communicates directly with the customer's mobile terminal. (Shteyn Col. 4 lines 18-23 and Col. 7 lines 38-45)

Regarding claim 10, Shteyn in view of Johnson teaches the data transmission server communicates indirectly with the customer's mobile terminal. (Shteyn Col. 3 lines 17-35, Col. 7 lines 38-50 and Col. 8 line 42 through Col. 9 line 24)

Regarding claim 11, Shteyn in view of Johnson teaches the data transmission server communicates with the customer's mobile terminal through a third-party wireless communication gateway. (Shteyn Col. 3 lines 17-51 and Col. 8 line 42 through Col. 9 line 24)

Regarding claim 12, Shteyn teaches a method of operating an information service system, comprising:

determining whether a potential customer enters a building that includes a plurality of shops; (Col. 7 lines 38-45)

obtaining general information about a product of a vendor corresponding to one of the shops from a database server; (Col. 7 lines 42-45)

automatically transmitting the general information between a data transmission server and a customer's mobile terminal when the potential customer enters the building; (Col. 4 lines 18-23 and Col. 7 lines 42-45)

receiving sudden event information from a network of a specified vendor, if a sudden event is generated by the specified vendor; (Col. 6 lines 17-26 & Col. 8 lines 12-41) and

registering the received event information in the database server (Fig. 4 [410]) and radio transmitting the sudden event information from a sudden information data transmission device to the customer's mobile terminal (Col. 8 lines 26-39), the sudden information data transmission device (Fig. 4 [402-408]) coupled to a control terminal in the vendor's shop (Fig. 4 [412-418]) and being located in an area different from the data transmission server (Col. 7 lines 42-54), and



wherein the sudden event information transmitted when the customer is located within a range of said sudden information data transmission device where reception by the mobile terminal is possible (Col. 3 lines 1-6, 36-51 and Col. 6 lines 17-26),

wherein the sudden event information is transmitted at different times and through different wireless links than the general information. (Col. 6 lines 17-26 *i.e.* second type, Col. 7 lines 42-45 *i.e.* first type and Col. 8 lines 12-41)

Shteyn teaches the network cell can give a guide of the beacons located within a local geographic area of the mobile phone (Col. 7 lines 38-42) in order to receive the sudden information regarding sales (Col. 4 lines 18-23 & Col. 6 lines 17-26), but differs from the claimed invention by not explicitly reciting that the operation server continuously receives information derived from reception by a mobile communication network of a pilot signal from the mobile phone to confirm a location of the customer within the building.

In an analogous art, Johnson teaches a system designed to communicate, receive signals and provides location dependent information for many devices simultaneously (Fig. 2 [204, 206 & 208]) and continuously (Col. 10 lines 17-19 and Fig. 3B) by triangulating the location of a mobile terminal in order to confirm the location of a customer within a building as a precondition to transmitting the sudden information (*i.e.* CADE candidate delivery event Col. 2 lines 16-37 and Col. 9 line 60 through Col. 10 line 7). (Fig. 5A and Col. 11 line 49 through Col. 12 line 11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the system of Shteyn after modifying it to incorporate the triangulation of Johnson. One of

ordinary skill in the art would have been motivated to do this since triangulating a transmitting signal is a common method in the art to determine the location of a mobile terminal because GPS circuitry is not accurate within buildings without requiring additional equipment to retransmit the satellite signals within the building.

Regarding claim 13, Shteyn in view of Johnson teaches the data transmission server transmits the general information to the mobile terminal by a wired or a radio medium. (Shteyn Col. 4 lines 18-23 and Col. 7 lines 38-45)

Regarding claim 14, Shteyn in view of Johnson teaches receiving customer information, regarding the mobile terminal, with the data transmission server while transmitting the general information to the mobile terminal. (Shteyn Col. 7 lines 33-54)

Regarding claim 15, Shteyn in view of Johnson teaches the customer information comprises at least one of a phone number of the mobile terminal and an Internet Protocol (IP) used by the mobile terminal. (Shteyn Col. 2 lines 42-44 and Col. 10 lines 61-67)

Regarding claim 19, the limitations of claim 19 are rejected as being the same reason set forth above in claim 9.

Regarding claim 20, the limitations of claim 20 are rejected as being the same reason set forth above in claim 10.

Regarding claim 21, the limitations of claim 21 are rejected as being the same reason set forth above in claim 11.

Regarding claim 22, Shteyn teaches a method of operating an information service system comprising:

confirming entry of a customer into a building containing a plurality of shops;  
(Col. 7 lines 38-45)

automatically obtaining information from a mobile terminal of the customer regarding the mobile terminal when the customer enters the building, and registering the obtained information in a database server; (Col. 7 lines 42-54)

awaiting a sudden event from a vendor in the building; (Col. 3 lines 56-62 and Col. 6 lines 17-26) and

obtaining sudden event information and transmitting the obtained sudden event information to the customer's mobile terminal (Col. 6 lines 17-26 and Col. 8 lines 12-41), in the building, when the sudden event arrives from the vendor,

wherein the sudden event information is radio-transmitted to the customer's mobile terminal, located within a range where reception by the mobile terminal is possible (Col. 3 lines 1-6, 36-51 and Col. 6 lines 17-26), by controlling a respective sudden information data transmission section installed within the building,

wherein the sudden event information is transmitted to indicate a sudden sale occurring in the building (Col. 6 lines 17-22), wherein the sudden event information is transmitted over different wireless links than planned event or basic information are transmitted to the customer's mobile terminal. (Col. 6 lines 17-26 *i.e.* second type, Col. 7 lines 42-45 *i.e.* first type and Col. 8 lines 12-41)

Shteyn teaches the network cell can give a guide of the beacons located within a local geographic area of the mobile phone (Col. 7 lines 38-42) in order to receive the sudden information regarding sales (Col. 4 lines 18-23 & Col. 6 lines 17-26), but differs

from the claimed invention by not explicitly reciting that the operation server continuously receives information derived from reception by a mobile communication network of a pilot signal from the mobile phone to confirm a location of the customer within the building.

In an analogous art, Johnson teaches a system designed to communicate, receive signals and provides location dependent information for many devices simultaneously (Fig. 2 [204, 206 & 208]) and continuously (Col. 10 lines 17-19 and Fig. 3B) by triangulating the location of a mobile terminal in order to confirm the location of a customer within a building as a precondition to transmitting the sudden information (*i.e.* CADE candidate delivery event Col. 2 lines 16-37 and Col. 9 line 60 through Col. 10 line 7). (Fig. 5A and Col. 11 line 49 through Col. 12 line 11) At the time the invention was made, it would have been obvious to one of ordinary skill in the art to implement the system of Shteyn after modifying it to incorporate the triangulation of Johnson. One of ordinary skill in the art would have been motivated to do this since triangulating a transmitting signal is a common method in the art to determine the location of a mobile terminal because GPS circuitry is not accurate within buildings without requiring additional equipment to retransmit the satellite signals within the building.

Regarding claims 35-37, Shteyn in view of Johnson teaches the sudden event information includes a short-term discount selling or issuance of discount tickets. (Shteyn Col. 6 lines 17-22)

Regarding claim 39, Shteyn in view of Johnson teaches the data transmission server is located at an entrance into the building. (Shteyn Col. 4 lines 17-22 & Col. 7 lines 38-45)

Regarding claim 40, Shteyn in view of Johnson teaches the database server (Shteyn Fig. 4 [410]) receives a selection signal from a store manager indicating a type of said stored information. (Shteyn Col. 8 lines 12-58)

Regarding claim 41, Shteyn in view of Johnson teaches the stored information is basic information or event information of the store. (Shteyn Col. 7 lines 42-45 and Col. 8 lines 12-58)

Regarding claim 42, Shteyn in view of Johnson teaches the first and second types of information are transmitted through different wireless links which conform to a same short-range communication protocol. (Shteyn Col. 6 lines 17-26 *i.e.* second type, Col. 7 lines 38-45 *i.e.* first type and Col. 8 line 54 through Col. 9 line 24)

Regarding claim 43, Shteyn in view of Johnson teaches the mobile terminal includes a wireless communications port for receiving the first and second types of information through the different links and an antenna for receiving calls from a mobile communication network. (Shteyn Col. 3 lines 17-20, 36-51 and Col. 8 line 51 through Col. 9 line 24)

Regarding claim 44, Shteyn in view of Johnson teaches the short-range communication protocol is a Bluetooth protocol or an infrared protocol. (Shteyn Col. 3 lines 36-51)

Regarding claim 46, Shteyn in view of Johnson teaches the mobile terminal is a mobile phone. (Shteyn Col. 7 lines 38-42)

Regarding claim 47, Shteyn in view of Johnson teaches the data transmission server automatically radio-transmits the first type of information in response to a customer request for the first type of information. (Shteyn Col. 4 line 17-22 & Col. 7 lines 33-54 and Johnson Col. 17 lines 11-24 *i.e.* User Event Management directly caused by a user)

Regarding claim 48, Shteyn in view of Johnson teaches the customer request is made based on the customer's manipulation of the mobile terminal or the data transmission server. (Shteyn Col. 7 lines 33-54 *i.e.* explicitly select a profile and Johnson Col. 17 lines 11-24 *i.e.* User Event Management directly caused by a user)

Regarding claim 50, Shteyn in view of Johnson teaches the sudden information includes a sudden promotional or sale event beginning in one of the shops, and wherein transmission of the sudden information is initiated after a confirmation has been performed indicating that the customer has entered and is still located in the building. (Shteyn Col. 3 lines 56-62 & Col. 6 lines 17-26)

#### **(10) Response to Argument**

In response to the Appellant's argument pertaining claim 1 that *the combination of the Shteyn and Johnson patents do not teach or suggest continuously receiving information derived from reception by a mobile communication network of a pilot signal from the customer's terminal to confirm a location of the customer within the building,*

*said confirmation serving as a pre-condition to transmitting the sudden information to the customer's terminal (Page 9), the examiner respectfully disagrees.*

The appellant has broken this limitation into two parts in the appeal brief, however the examiner considers this limitation as it is written in the claim, as being viewed together as one. The examiner views this limitation as being as simple as monitoring a fluctuating value (*i.e.* the mobile terminal's location Johnson Col. 2 lines 16-37 specifically lines 22-27 and Col. 7 lines 30-48) to fall within a given range (*i.e.* the values correlating to being located within a specific building Johnson Col. 11 line 49 through Col. 12 line 11 and Fig. 3B [318]) and during the time the fluctuating value is within a given range, performing a specific function. (*i.e.* transmitting information matching the requirements of a user definable profile and matching the user's current location Johnson line 60 through Col. 10 line 19, Fig. 13 [1304-1316] and Col. 36 lines 21-28) Further, Johnson teaches a continuous monitoring of all mobile devices (*i.e.* RDPS) within the network (Col. 10 lines 17-19 and Fig. 3B) by "the RDPS provides heartbeat for base stations" (*i.e.* analogous to the pilot signal, which is not defined in claim 1) through which the nearest base stations can receive the signals in order to determine the mobile terminal's location through one of several techniques, including triangulation. (Johnson Col. 9 lines 32-39 & Col. 11 lines 49-11)

In response to the Appellant's argument pertaining to claim 1 that *Shteyn does not take any steps to determine the location of the customer's terminal or whether the*

*customer's terminal is within range of one of the beacons* (Page 10), the examiner agrees.

The examiner never stated Shteyn teaches any steps "to determine the location of the customer's terminal", but rather when a mobile terminal is within range to receive information from a beacon transmitter, the mobile terminal receives information based on which beacon is transmitting and the user's profile. (Col. 3 lines 1-16 and Col. 17-26) Shteyn does not consider the exact location of a mobile terminal because the beacon transmitters are low power, short range systems (Col. 3 lines 36-51), which one of ordinary skill in the art would recognize that short range communication systems require the communication devices to be within a close proximity of each other to be able to reliably communicate.

In response to the Appellant's argument pertaining claim 1 that the *Shteyn patent does not teach or suggest the operation server is also required to control the database server and the data transmission server* (Page 10), the examiner respectfully disagrees.

Shteyn teaches the operation server (Fig. 4 [420]) determines the appropriate communication information to transmit to the mobile devices, when to transmit the information and determines the most appropriate communication protocol to be used for the transmission. (Col. 8 line 59 through Col. 9 line 24) Further, as stated above, the examiner never stated Shteyn teaches any steps "to determine the location of the customer's terminal". The examiner instead relies upon Johnson for teaching the location determining aspects, which were detailed above.



In response to the Appellant's argument pertaining to claim 1 that *the triangulation method of Johnson does not taken into consideration a pilot signal received by a mobile communication network as a basis for confirming the location of a customer terminal* (Pages 11-12), the examiner respectfully disagrees.

The examiner views this argument as being frivolous because the Appellant has made no attempt to explain how the "pilot signal" is different from any of the examples taught within Johnson or any of the further examples provided within Tricarico of the transmission from a mobile terminal of a "continuous tone" in order to locate the mobile terminal by triangulation. (Tricarico Page 3 [0031]) The "pilot signal" is not defined within the claim and is stated in Para [0052 PGPUB] as "originated from the respective customer's mobile terminal" and used by the communication network to identify the location of the mobile terminal. Therefore, the examiner views the "pilot signal" as being equivalent to Johnson's mobile terminals providing a "heartbeat for base stations" (Johnson Col. 9 lines 10-31) in order to determine location and Tricarico teaching the transmission from a mobile terminal of a "continuous tone" in order to locate the mobile terminal by triangulation. (Tricarico Page 3 [0031])

Finally, the examiner disagrees with the Appellant's limited interpretation of triangulation. One of ordinary skill in the art would recognize that there are multiple ways to triangulate a mobile device's location either as the Appellant described (three base stations, each transmitting a beacon signal that is time encoded for comparison by the mobile device) and also by having a mobile terminal transmit a single (or continuous tone) transmission that is compared by three base stations.

In response to the Appellant's arguments pertaining to the *Johnson system* "obviously provides the ability to receive a signal from a mobile continuously" not being supported (Page 12), the examiner respectfully disagrees.

The examiner views that one of ordinary skill in the art would recognize that a base station has to be able receive a signal from a mobile continuously because a base station has to be capable of receiving communications from mobile terminals at any point in time. A base station has no idea when the user of a mobile terminal plans on using the device. Further, Johnson explicitly states "Fig. 3B processing is continuous for every RDPS in the wireless network 7 days a week, 24 hours a day", wherein Fig. 3B teaches a looping process of monitoring the location of mobile terminals. Finally, although only relied upon in the final rejection as examples of triangulation techniques, Tricarico explicitly teaches receiving at base stations, a continuous tone that is transmitted from a mobile terminal.

In response to the Appellant's arguments pertaining to claim 47 that *Shteyn and Johnson fails to teach or suggest the data transmission server automatically radio-transmits the first type of information in response to a customer request for the first type of information* (Page 13), the examiner respectfully disagrees.

Shteyn teaches the ability for a user to "consciously select a context filter" that includes the type of claimed "first information" a user wishes to receive automatically and provides the ability of the communication network to transmit information to a user's

mobile terminal automatically based on the context filter upon a user entering a building. (Col. 7 lines 42-45) Further, Johnson teaches, as admitted by the applicant, that "Johnson discloses transmitting information to a user in response to a user request". (Page 13)

In response to the Appellant's arguments pertaining to claim 48, the examiner respectfully disagrees.

Shteyn teaches the ability for a user to select and modify a profile that contains the user's preferences for receiving location dependent transmissions (Col. 7 lines 33-54) and Johnson teaches the user controls the user event management for transmitting information upon a user's request. (Col. 17 lines 11-24)

In response to the Appellant's arguments pertaining to claim 49 (Page 14), the examiner is continuing to ignore these arguments (see final office action [7/27/2007], bottom of page 2) because this claim was canceled in the amendment filed on 5/8/2007.

In response to the Appellant's arguments pertaining to claims 12 and 22, the examiner respectfully disagrees and omits repetitive responses because they are the same as those listed above regarding claim 1.

In view of the above listed responses, the examiner respectfully requests the Board to affirm the status of the final rejection.

Art Unit: 2617

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Matthew C. Sams  
Examiner, A.U. 2617  
5/9/2008

/Matthew C. Sams/

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